

## Table of Programs

Program	Description	Page
<b>1dplot</b>	Graph columns of *.1D type time series to screen	004
<b>24swap</b>	Swaps byte pairs and/or quadruples on listed files	005
<b>2dImReg</b>	Slice-by-slice image registration of FMRI 3D datasets	006
<b>2swap</b>	Swap byte pairs for inter-operating system compatibility	007
<b>3T_toafni</b>	Send information about imaging sequence to AFNI	008
<b>3dANOVA</b>	Single factor Analysis of Variance for FMRI 3D datasets	008
<b>3dANOVA2</b>	Two factor Analysis of Variance for FMRI 3D datasets	009
<b>3dANOVA3</b>	Three factor Analysis of Variance for FMRI 3D datasets	009
<b>3dDeconvolve</b>	Deconvolution analysis of FMRI 3D time series data	010
<b>3dFWHM</b>	Estimation of image Filter Width Half Maximum	011
<b>3dFriedman</b>	Nonparametric Friedman test for blocked multiple sample	011
<b>3dIntracranial</b>	Automatic segmentation of intracranial region	012
<b>3dKruskalWallis</b>	Nonparametric Kruskal-Wallis test for multiple samples	012
<b>3dMannWhitney</b>	Nonparametric Mann-Whitney rank-sum two-sample test	013
<b>3dNLfim</b>	Nonlinear Regression Analysis of FMRI time series data	013
<b>3dRegAna</b>	Linear Regression Analysis of FMRI 3D datasets	014
<b>3dTSgen</b>	Generates random signal+noise 3D datasets	015
<b>3dTcat</b>	Concatenate sub-bricks into one 3D+time dataset	015
<b>3dTsmooth</b>	Smooth each voxel time series in a 3D+time dataset	017
<b>3dWilcoxon</b>	Nonparametric Wilcoxon signed-rank paired two-sample	018
<b>3daxialize</b>	Write out data brick oriented as axial slices	018
<b>3dbuc2fim</b>	Convert bucket sub-bricks to fim (fico, etc.) datasets	019
<b>3dbucket</b>	Concatenate individual sub-bricks into bucket dataset	020
<b>3dcalc</b>	Do arithmetic on 3D datasets, voxel-by-voxel	022
<b>3dclust</b>	Cluster detection and statistical summary	026
<b>3ddup</b>	Make duplicate copy of a 3D dataset	029
<b>3dfim</b>	Cross correlation analysis of FMRI 3D time series data	030
<b>3dfractionize</b>	Resample a mask dataset from a fine grid to a coarse grid	034
<b>3dhistog</b>	Compute histogram from FMRI 3D dataset	035
<b>3dinfo</b>	Print out useful information from a 3D dataset header file	036
<b>3dmaskave</b>	Compute average of all voxels specified by a 3D mask	039
<b>3dmerge</b>	Edit, cluster, filter, and merge FMRI 3D datasets	040
<b>3dnewid</b>	Assign a new ID code to a dataset	049
<b>3dnoise</b>	Set voxels below noise threshold to zero	049
<b>3dnvals</b>	Print out the number of sub-bricks in a 3D dataset	050
<b>3dpc</b>	Principal Component Analysis of 3D datasets	050
<b>3dproject</b>	Projection along cardinal axes from a 3D dataset	051
<b>3drefit</b>	Change information in a 3D dataset's header	053
<b>3drotate</b>	Rotate and/or translate all bricks from a 3D dataset	056
<b>3dtttest</b>	Perform t-test for sets of FMRI 3D datasets	057
<b>3dvolreg</b>	Register each input 3D sub-brick to a base brick	061

## Table of Programs (continued)

Program	Description	Page
<b>4swap</b>	Swap byte quadruples on the files listed	063
<b>AlphaSim</b>	Estimate stat. significance via Monte Carlo simulation	064
<b>FD2</b>	Visualization of FMRI 2D datasets	064
<b>RSFgen</b>	Generate random stimulus functions	064
<b>abut</b>	Put noncontiguous FMRI slices together (for to3d)	065
<b>adwarp</b>	Resample dataset to grid defined by 'anat parent' dataset	066
<b>afni</b>	Visualization of FMRI 3D datasets	067
<b>byteorder</b>	Indicates host CPU byte order	067
<b>ccalc</b>	Perform interactive arithmetic calculations	067
<b>cdf</b>	Calculates various cumulative distribution probabilities	068
<b>count</b>	Generates strings of numbers	068
<b>fm2</b>	Cross correlation analysis of FMRI 2D time series data	069
<b>float_scan</b>	Scan input file of floating point numbers for illegal values	076
<b>from3d</b>	Extract 2D data files from 3D datasets	077
<b>ftosh</b>	Convert float 2D images to short 2D images	079
<b>imand</b>	Produce logical "and" of a sequence of input images	080
<b>imaver</b>	Compute mean and std. dev. of sequence of 2D images	080
<b>imcalc</b>	Do arithmetic on 2D images, voxel-by-voxel	081
<b>imdump</b>	Prints out non-zero pixels in a 2D image	082
<b>immask</b>	Apply mask to input 2D image	083
<b>imreg</b>	Register a sequence of 2D images	084
<b>imrotate</b>	Rotate and/or translate a sequence of 2D images	088
<b>imstack</b>	Stack up a set of 2D images into one big file	089
<b>imstat</b>	Calculate statistics for one or more images	089
<b>imupsam</b>	Upsample the input 2D image	090
<b>mritopgm</b>	Convert an image to raw pgm format	091
<b>nsize</b>	Zero pads 2D image to next larger power of 2	091
<b>p2t</b>	Calculate tail probabilities	092
<b>sfm</b>	Selective averaging of 2D image time series	093
<b>sqwave</b>	Creates an ideal square wave time series file	094
<b>tfm</b>	Perform t-test for sets of 2D images	096
<b>to3d (batch )</b>	Convert 2D images into 3D datasets for AFNI	097
<b>to3d (interactive)</b>	Convert 2D images into 3D datasets for AFNI	105
<b>waver</b>	Creates an ideal waveform time series file	111